



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

minutely and quite accurately represented by Dr. Carpenter's description (*The Microscope*, London, 1868, pp. 68 and 69). He continued to make these stages, and in the year 1864 furnished one to Prof. Edwin Emerson, then of Paris, who took pains to show the American stand to those interested in microscopes and especially to the makers. In October of the same year Mr. (now Dr.) W. W. Keen of Philadelphia exhibited one of these stands, with a similar stage, to Nachet, and the following spring placed it in his hands for safe packing for return to this country. These goniometer stages were certainly substantially the same as those now made, and were probably equal to any of the latter in delicacy of adjustment and finish; and it would seem that the publicity then given to them should guarantee to their maker the credit for their invention, unless some other person should claim to have arranged, and in some way published, an identical contrivance at an earlier date.

NOTES.

IN the construction of new cases for the birds in the museum of the Boston Society of Natural History, we learn from the report of the custodian, Prof. Hyatt, "that extraordinary precautions were taken in order to render these cases absolutely insect-tight. The lumber was very carefully selected and kept heated while the work was going on, all joints were tongued, grooved and glued. The tops, bottoms and sides, were built into the plastering, the sashes grooved and tongued and locked by wedge-shaped bolts. The latter were invented in order to draw the sashes up tightly and firmly against the tongues at the top and bottom, and completely close the fronts of each case. Morse's patent brackets were used to suspend the shelving, which hangs upon the wall, and has no connection with the fronts. The success of these precautions is shown by the air-tight condition of the cases. By suddenly opening or closing a sash, one could readily crush in, or burst out, the neighboring glass panes. The resistance of the air is so great that it has to be overcome by a steady slow pressure as if one was working the handle of a piston. With the exception of the method of bolting, and some other details, this plan is similar to that which has been successfully adopted by the Smithsonian Institution for the preservation of their valuable collection of birds, and was recommended to us by Professor Baird.

“The entire collection of Coleoptera has been placed in insect-proof boxes by Mr. Sprague, and he has begun to secure the Harris collection in a similar manner. I desire, however, to call the attention of the society to the boxes upon the table. These are experiments upon the methods of mounting and illustrating the typical collection of insects, and will probably be adopted throughout that department. The difficulties that were overcome, and amount of study and labor expended by Mr. Sprague in making these pattern boxes, can only be rightly appreciated by those who have watched their progress. One of them exhibits the ventral and dorsal aspects of a large beetle, showing all the parts appropriately named. This is to be the type of the order. The other boxes contain the types of several genera and two families. The enlarged outlines of these small insects are given from the dorsal and ventral sides, accompanied by specimens having a similar position. On the right hand side of the box in each case are the characteristic parts, likewise greatly enlarged, so as to be readily seen, but each figure accompanied by its corresponding dissection. The characteristics of the family and genus are written opposite, so that the visitor sees at one glance the animal, its parts, and the family and generic characteristics. The outlines are drawn with the camera lucida, and corrected by the most careful study, so that they are as accurate as it is possible to make them.”

PROF. SHALER of Harvard College at the last meeting of the American Educational Association followed with an address upon “The Method of Teaching Natural History.” This, he said, as practised by him, embodied the same leading principles as had just been suggested by Prof. Pickering, the aim being to give the student a practical quite as much as a theoretical knowledge of the science. No text-book served as the basis of teaching, as it was quite insufficient for thorough instruction. A student in the first course is directed as his first lesson to go forth into nature and catch some kind of a living creature for study. It was no matter what he caught, whether a fly, a bird or a serpent. Having made a capture, the student is told to observe the creature and note down his observations. No matter what he observes, nothing can be too trivial, the point being to teach him to use his eyes. His notes are reviewed by the teacher, and appropriate comment and suggestion made with regard to further inquiry. It was a trait of

human nature that the study of dead things is at first repugnant to us. Living things are always interesting. The student accordingly begins with these, and this experience has almost invariably the effect to awaken his genuine interest or enthusiasm in the phenomena of nature. This is the second point gained. With this his attention can be fastened upon dead specimens, and the laws of organization as ascertained through these can be taught. Following upon this the practice was to take up some one of the great sequences of nature as observable in the animal kingdom; such as is given by the series of the actinoid polypes. The highest class had during the past year gone through with a course holding up to view what is known upon the most pressing question of the times, namely, the origin of the human species. The essential features of this method was first brought into use in this country by Agassiz, the only changes being such as were required to make it applicable to large numbers of students and to extend it to a course of several years of required work in the university.

THE London "Journal of Botany" for January contains an interesting biographical sketch of Friedrich Welwitsch, the eminent botanist and discoverer of the singular plant which bears his name. He was born in Germany in 1807, but spent a portion of his life in the employment of the Portuguese government as superintendent of various gardens, while he paid much attention to the fungi and algæ, especially of Portugal. But his chief work was in elaborating the immense collections of plants made in the interior of Africa during a series of journeys which lasted seven years. "It was during his residence at Sange that Dr. Welwitsch made the acquaintance of Dr. Livingstone, then (October, 1854) on his way to Loanda, having travelled the whole distance from Cape Town. The two travellers lived together for some time, and the meeting had the effect of determining Dr. Welwitsch on relinquishing an idea he had previously entertained of endeavoring to make his way across the continent to the Portuguese possessions on the east coast—a task which, as is well known, Livingstone successfully accomplished during the two following years." As the result of these difficult and dangerous journeys he formed the best and most extensive herbarium ever collected in tropical Africa. He was the author of several botanical papers of a high order of merit.

Mr. W. H. SEAMAN of Washington sends us the following note :
“ I send you by mail a small tin box containing minerals, which are specimens of an incrustation, forming on parts of the northern face of the Washington monument in this city. It is about two hundred feet high, unfinished, and the top protected by an imperfect shed of boards. The walls are gneiss faced with marble, and this curious stalagmite, for such it really is, appears to be formed by the water percolating from the top of the wall through the joints, and dissolving a part of the mortar which is deposited upon its outer surface. The deposits always commence at a joint and widen as they descend like the letter A, covering sometimes several square feet, usually firmly attached to the marble. The edifice has been built about twenty years. Mr. Clark, architect of the Capitol, states that a similar incrustation forms on the inside of the arches, under the capitol steps, but it is scraped off every year.” It is certainly interesting as an example of natural deposit under artificial conditions.

WE are glad to inform our readers that the tax on alcohol, so grievous to museums, is to be removed when used for scientific purposes. According to the Boston “Journal” Prof. Agassiz’s bill, as it is called, to remit the excise duties on alcohol used for scientific purposes, which was passed by the House on the 23d, was passed February 12th by the Senate, and will soon become a law. The bill provides that the alcohol can be withdrawn from bond by the Presidents or Curators of scientific institutions or colleges, for the sole and exclusive purpose of preserving specimens of anatomy, physiology or of natural history, or for use in any chemical laboratory of such institutions ; and if any alcohol thus obtained shall be used for any other purposes than those specified, then the officers of the institution or their sureties shall pay the tax on the whole amount withdrawn from bond, together with a like amount as a penalty in addition thereto.

WE regret to announce the death of Prof. F. B. Maury, the author of the “Physical Geography of the Sea” and of “Sailing Directions” for seamen.

THE Government has appropriated \$75,000 for the continuance next year of Prof. Hayden’s geological survey of the public lands, and \$10,000 for the completion of the reports of Mr. Powell’s expedition.

DR. O. NORDSTED describes in the sixth part of the "Ofversigt" of the Stockholm Academy of Sciences for 1872 the Desmidiaceæ collected by the Swedish expeditions in 1868 and 1870 to Spitzbergen and Bear Island. Fifty species are enumerated, nine being described as new, and carefully figured.— *Journal of Botany*.

ANSWERS TO CORRESPONDENTS.

M. R. S., Canandaigua, N. Y. — The birds referred to by you are, as you supposed, the snow bunting (*Plectophanes nivalis*), and the snow bird (*Junco hyemalis*). Their habitat is given in Coues' "Key to North American Birds," and their habits are quite fully described in the works of Wilson, Audubon and Nuttall. — J. A. A.

BOOKS RECEIVED.

- Bidrag till Ofversigt af sveriges ichtthylogiska literatur. Akademisk Afhandling som med vidtberomda filosofiska fakultetens i Upsala tillstand for Filosofiska Gradens erhallande till offentlig granskning framstalles af Fredrick Lundberg.* 8vo pamph. pp. 56. Stockholm. 1872.
- List de Coleopteres Exotiques en vente chez A. Boucard.* No. 8. f2mo pamph. pp. 28. London.
- Account of the Exploration of Mammoth Cave.* By L. S. Burbank. (From Proc. Bost. Soc. Nat. Hist.) 8vo. pp. 2.
- On the Gigantic Fossil Mammals of the order Dinocerata.* By O. C. Marsh. (From Am. Jour. Sci. and Arts, Feb., 1873.) 8vo. pp. 8, 2 plates. Received Jan. 29, 1873
- Half-hour Recreations in Popular Science. Unconscious Action of the Brain and Epidemic Delusions.* By W. B. Carpenter. 12 mo. pp. 64. Boston, 1872.
- Third and Fourth Annual Reports of the Geological Survey of Indiana, made during the years 1871 and 1872.* By E. T. Cox. 8vo. pp. 488. Indianapolis, 1872.
- Maps for Geological Survey of Indiana.* 8vo. 1872.
- The History of Balanoglossus and Tornaria.* By Alexander Agassiz. 4to. pp. 16. Plate 3. Cambridge, 1873.
- Entomologische Zeitung.* 8vo. pp. 494. With 2 plates. Stettin, 1872.
- The Microscope and Microscopical Technology.* By Heinrich Frey. Translated from the German by George R. Cutter. 8vo. pp. 658. Illustrated by 343 engravings. New York, 1872.
- Jahrbuch der kaiserlich-koniglichen geologischen Reichsanstalt.* Band XXII. No. 3. 8vo. pp. 77. 4 plates. Mineralogische Mittheilungen gesammelt von Gustav Tschermak. Jahrgang, 1872. Heft 3. pp. 82. 2 plates. Wien, 1872.
- Verhandlungen der k. k. geologischen Reichsanstalt.* Nos. 11, 12 and 13. 8vo. Wien, 1872.
- Recherches Physico-chimiques sur les Articules Aquatiques.* Part I. Par Felix Plateau. 4to. pp. 66. Bruxelles, 1870. Part II. 8vo. pp. 50. Bruxelles, 1872.
- Materiaux pour la faune Belge. Deuxieme Note. Myriapodes.* Par Felix Plateau. 8vo. pp. 21. 1 plate. Bruxelles, 1872.
- Qu'est-ce que l'aile d'un Insecte.* Par Felix Plateau. 8vo. pp. 10. 2 plates.
- Tidskrift for Populære Fremstillinger af Naturvidenskaben.* Fjerde Raekke. Fjerde Bind. Sjette Hefte. 8vo. Kjobenhaven, 1872.
- Proceedings of the New England Historic-Genealogical Society, at the Annual Meeting, January 1, 1873.* 8vo. pp. 44. Boston.
- Arrangement of the Families of Mammals.* (From Smithsonian Miscellaneous Collections.) By Theodore Gill. 8vo. pp. 98. Washington, 1872.
- Fourteenth Annual Report of the Indiana State Board of Agriculture, 1872, including the Report of Professor E. T. Cox, State Geologist, for 1871 and 1872.* 8vo. pp. 432. Indianapolis.
- Twentieth Report of the Superintendent of Public Instruction for the State of Indiana.* 8vo. pp. 424. Indianapolis, 1872.
- Diagram showing the Progress of the Anthracite Coal Trade of Pennsylvania.* By P. W. Shearer.
- Results of Recent Dredging Expeditions on the Coast of New England.* (From Am. Jour. Sci. and Arts.) By A. E. Verrill. 8vo. pp. 9. January 18, 1873.
- Land and Water.* London. Nos. 109 Dec. 28, 1872; Jan. 4, 18, 29, Feb. 1, 1873.
- The Field.* London. Nos. for Dec. 28, 1872; Jan. 4, 18, 25, Feb. 1, 1873.
- Nature.* London. Nos. for Dec., 1872; Jan. 9, 16, 23, 1873.
- The Academy.* London. Nos. for Dec. 15, 1872; Jan. 1, 15, Feb. 1, 1873.
- The American Journal of the Medical Sciences.* Philadelphia. Jan., 1873.
- The Popular Science Monthly.* New York. Jan. and Feb., 1873.
- Bulletin Mensuel de la Societe d'Acclimatation.* Paris. Tome ix. Nos. for Aug., Sept. and Oct., 1872.
- Bulletin de la Societe des Sciences Naturelles de Neuchatel.* Neuchatel. Tome ix. Cahier 2. 1872.
- Le Naturaliste Canadien.* Quebec. Vol. v, No. 1. Jan., 1873.
- The Journal of Applied Science.* London. Vol. iii. Nov. 1, 1872.
- Bulletin of the Torrey Botanical Club.* New York. Vol. iv, No. 1. 1873.
- Revue Scientifique.* Paris. Jan. 18, 25, Feb. 1, 1873.
- The American Journal of Science and Arts.* New Haven. Vol. v. Feb., 1873.
- Journal of the Franklin Institute.* Philadelphia. Jan. and Feb., 1873.